

Remarks

Figures 3-5 were inadvertently not included in the original filing. Figures 3-5 are enclosed herewith as requested by the Examiner. Applicant submits that no new matter has been introduced in Figures 3-5.

The specification has been amended at pages 18-19 to more accurately describe the embodiments illustrated in Figures 1-3. No new matter is believed to be entered by the instant amendments.

Claims 1, 3, 8-15, and 18-20 have been amended. Claims 1-20 remain in the application. Reconsideration and allowance of these claims as now presented is respectfully requested.

Claims 18 and 19 stand objected to for various informalities. Such claims have been amended as requested by the Examiner. The objections should therefore be withdrawn.

Rejection of Claims Under 35 U.S.C. §112

Claims 2-4, 9, 14, 15, and 18 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 3, 14, 15, and 18 have been amended to address the antecedent basis issues pointed out by the Examiner. In paragraphs 10-13 of the instant Office Action, the Examiner objects to the claim usage of the terms "about" and

"substantially". Such terms have long been used to definitely claim amounts or relationships of positive claim elements. MPEP §2173.05(b) particularly identifies the above terms as being definite, and provides legal precedent for such statements. Moreover, a term used in the claims may only be considered indefinite where the scope of the term is not understood when read in light of the specification. With regard to Claim 9, the term "about" refers to a distance determined by the equation set forth on page 10, line 3, which calculates the depth of penetration of radiant energy into first layer 20, such that the radiant energy arresting portion is spaced from the inner boundary of layer 20 so as to not interfere with the propagation of such radiant energy. Since the distance defined in Claim 9 is on the order of radiant energy wavelengths, it would be exceedingly difficult in practice to achieve an exact claimed distance of two wavelengths. As such, it is necessary and definite to describe the distance in Claim 9 as being about two wavelengths of the radiant energy. Finally, the scope of the term "about" is further identified at page 9, lines 18-20.

With regard to the term "substantially" in Claims 2-4, and the term "substantial" in Claim 18, a claim reciting absolutely exact concentricity is unrealistic, in that

slight errors in the manufacturing process are virtually impossible to eliminate. Those of ordinary skill in the art understand the difficulties in obtaining pure concentricity, and readily perceive the parameters of the claimed invention. Thus, it is proper to recite the relative concentricity as "substantially". Furthermore, the scope of the term "substantially" as claimed is defined at page 11, lines 22-26.

For the foregoing reasons, the claims as now amended clearly and definitely describe the subject matter of the invention. The claim rejections of 35 U.S.C. §112 should accordingly be withdrawn.

Rejection of Claims Under Obviousness-Type Double Patenting

Claims 18-20 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 16 of U.S. Patent Application Serial No. 09/765,497 (Gerner et al.), which is assigned to the same assignee as in the present application. Nowhere do Gerner et al. '497 teach or suggest a radiant energy arresting portion in one or more layers of material lining an open bore within a cell body. In fact, such a radiant energy arresting portion is the primary aspect of the present invention, and therefore renders the claims of the present application both novel and non-obvious over Gerner

et al. '497. Since no light arresting portion as described in the presently claimed invention is disclosed or suggested in the cited prior art, Applicant respectfully submits that the presently pending claims are clearly distinguishable and patentable over such cited prior art.

The claimed radiant energy arresting portion is a physical characteristic of the claimed device that is not found in Gerner et al. '497. The arresting portion absorbs substantially all spectrophotographic radiant energy imparted thereon, thereby effectively preventing such radiant energy from propagating through the flow cell. No such physical feature is found in the cited prior art. The double patenting claim rejections based thereon should accordingly be withdrawn.

Rejection of Claims Under 35 U.S.C. §102

Claims 1, 8 and 17 stand rejected under 35 U.S.C. §102(b) as being anticipated by Liu (U.S. 5,416,879). Nowhere does Liu '879 teach or suggest a radiant energy arresting portion, as is presently claimed. In reading the instant Office Action, Applicants realized that the Examiner has confused the presently claimed radiant energy arresting portion with a light reflecting and refracting component described in Liu '879. As described throughout the present application, however, the radiant energy

arresting portion comprises a substantially opaque material that arrests propagation of radiant energy. The citations pointed out by the Examiner actually refer to light refractive materials, which propagate radiant energy as opposed to arresting such radiant energy. The present amended claimed distinguish such portions of the invention by reciting a distinct radiant energy arresting portion and a radiant energy propagation portion.

Nowhere does Liu '879, nor any other cited prior art, teach or suggest a distinct radiant energy arresting portion as is presently claimed. The claim rejections based upon Liu '879 should accordingly be withdrawn.

Claims 1, 8 and 9 stand rejected under 35 U.S.C. §102(b) as being anticipated by Liu (U.S. 5,570,447), For the reasons stated above, Liu '447 does not teach or suggest the presently claimed radiant energy arresting portion. Accordingly, the claim rejections based thereon should be withdrawn.

Rejection of Claims Under 35 U.S.C. §103

Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Liu '879. For the reasons stated above, Liu '879 fails to teach or suggest a radiant energy arresting portion, as is presently claimed. The claim rejections based thereon should accordingly be withdrawn.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Liu '879 in view of Gilde et al. (U.S. 5,184,192). Gilde et al. '192 fail to cure the defects of Liu '879, as stated above. Therefore, the claim rejections based thereon should accordingly be withdrawn.

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Liu '879 in view of Dasgupta et al. (U.S. 6,011,882). Dasgupta et al '882 fail to cure the defects as stated above of Liu '879. As such, the claim rejections based thereon should accordingly be withdrawn.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Liu '879 in view of Lahijani (U.S. 6,177,518). Nowhere does Lahijani '518 teach or suggest a substantially opaque colorant that may be used as a radiant energy arresting portion disposed in a flow cell, as is presently claimed. Such a radiant energy arresting portion effectively absorbs stray radiant energy coming into contact therewith, such that the stray radiant energy is not transmitted to the, for example, spectrophotographic detector. Therefore, Lahijani '518 fails to cure the defects of Liu '879 as described above.

For the foregoing reasons, the claims as presently amended are believed to be unobvious and patentable over the cited prior art, whether taken alone or in combination.

Applicants therefore submit that the claims as now presented are allowable on the merits. An early allowance is respectfully solicited.

Respectfully submitted,

HAUGEN LAW FIRM PLLP

A handwritten signature in black ink, appearing to read "Mark J. Burns", written in a cursive style.

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